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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/371,760

08/10/1999

TOMOYUKI FUNAKI

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07/16/2004

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EXAMINER

NOLAN, DANIEL A

ART UNIT

PAPER NUMBER

2654

34

DATE MAILED: 07/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/371,760

Applicant(s)

FUNAKI, TOMOYUKI

Examiner

Daniel A. Nolan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23, 25 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08 June 2004 has been entered.

Response to Amendment

3. The response filed 08 June 2004 has been entered to the following effect:
 - Claims 23, 25 and 27 were amended as indicated and examined on the merits.

Allowable Subject Matter

4. The indicated allowability of claims 5, 22, 24 and 26 are withdrawn in view of the newly discovered reference(s) to Silfvast et al. Rejections based on the newly cited reference(s) follow.

Claim Objections

5. Claim 27 is objected to because of the following informalities:

- A word needs to be inserted after "user" (in the 2nd line from the end).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

Zimmerman^{'789}

6. Claims 23, 25 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Zimmerman^{'789} (U.S. Patent 5,287,789).

7. Regarding claims 23, 25 and 27, Zimmerman^{'789}, with the invention for *music training apparatus*, reads on the features for the claims for *sound signal analyzing* as follows:

- Zimmerman^{'789} reads on the feature that *an input section that receives sound signals to be analyzed* (2nd line of Abstract),
- Zimmerman^{'789} reads on the feature of *a characteristic extraction section that extracts pitch of a sound signal as it is received by the input section* (column 5 lines 21-22)

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- Zimmerman^{'789} reads on the feature of a *designating section that, based on the pitch of the sound signal, designates at least one of an upper and lower pitch limit as a pitch limit characteristic* (470 in figure 12);
- Zimmerman^{'789} reads on the feature of a *setting section that sets various parameters for use in subsequent analysis of sound signals received by the input section in accordance with the pitch limit characteristic* (column 20 lines 7-8), *including at least a threshold value* (465 in figure 12); and
- Zimmerman^{'789} does disclose the features of a *display section that visually displays the pitch limit characteristic by displaying an image indicative of at least one of the upper and lower pitch limit* (in figure 12) that is controlled by the same device (MCU, column 5 lines 48-58). Zimmerman^{'789} subsequently teaches the further limitation where a user can vary the pitch limit characteristic by manipulating the image such that the setting action sets the various parameters in accordance with the varied pitch limit characteristic (column 14 lines 67-68).

Adachi et al

8. Claims 23, 25 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Adachi et al (U.S. Patent 5,287,789).

9. Regarding claims 23, 25 and 27, Adachi et al, with the invention for *music training apparatus*, reads on the features for the claims for *sound signal analyzing* as follows:

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- Adachi et al reads on the feature that *an input section that receives sound signals to be analyzed* (column 7 lines 61-67),
- Adachi et al reads on the feature of a *characteristic extraction section that extracts pitch of a sound signal as it is received by the input section* (column 8 lines 53-55)
- Adachi et al reads on the feature of a *designating section that, based on the pitch of the sound signal, designates at least one of an upper and lower pitch limit as a pitch limit characteristic* (column 8 lines 47-55);
- Adachi et al reads on the feature of a *setting section that sets various parameters for use in subsequent analysis of sound signals received by the input section in accordance with the pitch limit characteristic* (column 8 lines 62-65), *including at least a threshold value* (the *desired tone area* line 65); and
- Adachi et al does disclose the features of a *display section that visually displays the pitch limit characteristic by displaying an image indicative of at least one of the upper and lower pitch limit* (column 8 lines 62-65),
- Adachi et al subsequently teaches the further limitation where *a user can vary the pitch limit characteristic by manipulating the image such that the setting action sets the various parameters in accordance with the varied pitch limit characteristic* (column 9 lines 9-27).

Silfvast et al

10. Claims 22, 24 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Silfvast et al (U.S. Patent 5,524,060 A).

11. Regarding claims 22, 24 and 26, Silfvast et al, with the invention of *visual dynamics management for audio instrument*, reads on the features for the claims for *sound signal analyzing* as follows:

- Silfvast et al reads on the feature for *receiving sound signals to be analyzed* (37 in figure 2);
- Silfvast et al reads on the feature for *extracting a volume level of a sound signal as it is received by the step of receiving* (column 12 line 19);
- Silfvast et al reads on the feature for *setting various parameters for use in subsequent analysis of sound signals received in accordance with the volume level of the sound signal extracted* (column 5 lines 30-33), *including at least a threshold value* (column 6 line 16 out, column 7 lines 6-7 in – see figure 10); and
- Silfvast et al reads on the feature for *displaying a current value of the volume level and the threshold value* (figure 10 – see column 14) *determined by an extracted value of the volume level* (lines 41-62 with column 14 lines 63 to column 15 line 2) *in accordance with a predetermined criterion* (set by the “Gain Ball™” of column 15 lines 3-7).

12. Regarding claim 5, the claim is set forth with the same limitations as claim 22.

Silfvast et al reads on the feature that the *setting section includes an operator operable by a user* (the “Gain Ball™” – see column 15 lines 54-65) that, *in response to operation*

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of the operator by the user (column 15 lines 58-59), confirms the volume level of the sound signal displayed by the display section (column 15 lines 60-61).

Silfvast et al teaches that *hysteresis* is a change in the threshold in response to the volume level but with respect to *input signal level* and so inherently teaches the feature that *thereby sets the threshold value* (column 10 lines 42-43).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Iba et al (DERWENT 1991-206971 & 1992-225629) Electronic instrument has sensors, programmable function assigning circuit and controller responding to display setting (U.S. Patent 5,025,703 – June 1991); Electronic instrument has string pitch & envelope detectors and programmable controller for assigning tones and/or effects in response to display (U.S. Patent 5,121,669 – June 1992).
- Iwase (U.S. Patent 4,957,552 A) electronic musical instrument with plural musical tones designated by manipulators.
- Ando (U.S. Patent 5,936,180 A) waveform-data dividing device.
- Crinon et al (U.S. Patent 5,228,098 A) adaptive compression/decompression.
- Isozaki et al (U.S. Patent 5,981,860 A) sound source system based on computer software and method of generating acoustic waveform data (column 3).

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14. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Daniel A. Nolan at telephone (703) 305-1368 whose normal business hours are Mon, Tue, Thu & Fri, from 7 AM to 5 PM.

If attempts to contact the examiner by telephone are unsuccessful, supervisor Richemond Dorvil can be reached at (703)305-9645.

The fax phone number for Technology Center 2600 is (703)872-9314. Label informal and draft communications as "DRAFT" or "PROPOSED", & designate formal communications as "EXPEDITED PROCEDURE". Formal response to this action may be faxed according to the above instructions,

or mailed to:

P.O. Box 1450
Alexandria, VA 22313-1450

or hand-deliver to: Crystal Park 2,
2121 Crystal Drive, Arlington, VA,
Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 Customer Service Office at telephone number (703) 306-0377.

Daniel A. Nolan
Examiner
Art Unit 2654

DAN/d
June 28, 2004


RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER